

# [Evaluation of cognitive behavioural therapy effectiveness](https://assignbuster.com/evaluation-of-cognitive-behavioural-therapy-effectiveness/)

1. Introduction

The following discussion will critically evaluate the research evidence which is available regarding the efficacy and effectiveness of Cognitive Behavioural Therapy (CBT). It will particularly focus upon its application to the treatment of Schizophrenia Initially, a brief explanation of what is meant by CBT will be given along with an outline of the model which underpins it. A consideration of the use of CBT for the treatment of Schizophrenia will then be made. A series of 25 studies which have been conducted to investigate the efficacy and effectiveness of the use of CBT for the treatment of Schizophrenia have been critically analysed. The results of this analysis will be presented with reference to the following key factors: the determinant and measurement of quality of life, social functioning and occupational status, hospital readmission/relapse, compliance with pharmacological and non-pharmacological treatments, dropping out and compliance to CBT, general impression of clinical/professionals and others, unexpected and unwanted effects, economic outcomes and the management of change.

2. 0 Cognitive Behavioural Therapy (CBT)

It has been said that the thoughts people have of a situation, and the way IN WHICH they interpret and understand it, are largely influenced by their beliefs about themselves and the world (Nelson 1997). Such a view is congruent with the underlying principles of Cognitive Behavioural Therapy (CBT). The 1980s saw pioneering work being conducted by Aaron Beck using Cognitive Therapy (Beck & Rector 2000). This was later merged with the principles of Behavioural Therapy to produce what was entitled CBT. The Cognitive-Behavioural approach is fundamentally based on the three factors: Cognition, Behaviour and Emotion which are displayed in Figure 1 overleaf:

In other words, this concept suggests that the way in which an individual thinks about and interprets a situation will directly influence their behaviour within the situation. This in turn will impact upon how they feel after performing the behaviour (Kinderman & Cooke 2000)

Thus on a very basic level, a person’s views regarding smoking will influence whether or not they are a smoker and how they feel about it. These principles provide the foundation upon which the rationale for treating an individual is built. If one wishes to change the way in which an individual is feeling, one must address the associated behaviours and underlying thoughts. CBT could therefore be used to help a person to stop smoking. An attempt would be made to change the way in which the person thought about smoking which would then, in theory, influence their behaviour in terms of whether or not they smoked and how they felt as a consequence. The same principles and procedure could be used to treat other addictions and phobias whilst also being applicable to depression and anxiety related problems.

In order for this process to be most effective, CBT relies heavily on a trusting and collaborative relationship being formed between the therapist and the patient. An alliance is formed through which positive changes can be facilitated. The Therapist and the patient work together in order that any problems are identified and that an appropriate treatment programme is worked out (Beck 1995). It is important therefore that the patient is committed and willing to take part in the treatment so that the probability that the treatment is effective can be maximised.

2. 1 The development of CBT

CBT was originally developed and applied to the treatment of neurosis (Haddock et al 1998). It was mainly used for the treatment of people suffering from depression and anxiety. More recently, CBT has started to be applied to a wide range of other problems such as phobias and addictions. The success of such applications has led its supporters to advocate the use of CBT to the treatment of psychosis (Thornicroft & Susser 2001). This incorporates illnesses such as Paranoid Schizophrenia and Bipolar Disorder. Morrison (2002) provides a wide variety of case studies in which CBT was used as a treatment method.

3. 0 Research Evidence

Any decision regarding the use of a given treatment must be based upon the scientific documentation which has assessed the treatment’s effectiveness and efficacy (Carpenter 2001). Thus one needs to consider the empirical research which has assessed the psychological management of psychotic symptoms. This research will now be discussed with reference to acute psychotic symptoms, long term psychotic symptoms and research which has been conducted in a clinical setting. The research which has been conducted to assess the efficacy and effectiveness of CBT for the treatment of Schizophrenia will now be critically analysed with reference to the nine different evaluation areas.

3. 1 Determinant and Measurement of Quality of Life

The first key issue in the debate surrounding the use of CBT in the treatment of Schizophrenia concerns how a person’s quality of life is determined and how it can best be measured. Clearly one of the central aims of medicine in general, and in mental health care in particular, is to improve the quality of life of the patient. A number of studies have attempted to investigate the quality of life of Schizophrenic patients after undergoing CBT. One of the larger studies was conducted by Lewis et al (2002) and involved a sample of 315 Schizophrenic patients being given CBT along side routine care and supportive counselling. It was reported that a significantly faster clinical improvement was made by those within the CBT condition relative to a control group. Lewis et al (2002) concluded that CBT enabled Schizophrenic patients to reach remission more quickly and that this was associated with an increase in their quality of life. This approach suggests that quality of life, therefore, is determined by a removal of the symptoms associated with the illness. However, the conclusions made by the research have been questioned as significant improvements were made by the CBT group only in terms of a reduction in auditory hallucinations and not in terms of delusions, positive symptoms and the total Symptom Scores.

Other relevant research was conducted by Jenner et al (1998) regarding the measurement of quality of life. CBT and coping skills training was given to 40 patients experiencing therapy-refractory auditory hallucinations. Significant improvements were found regarding overall symptomotology and in daily quality of life. This improvement in quality of life was said to be determined by improvements in daily functioning and social interactions. Auditory hallucinations were found to be eradicated for 20% of patients. Therefore, research in this field has suggested that CBT can improve the quality of life of Schizophrenic patients. This is determined by factors such as remission from symptoms and improvements in both daily functioning and social interactions. However, the measurement of ‘ quality of life’ is a difficult concept as it is difficult to obtain relevant objective data. One must rely more on the subjective ratings of the patients, their family and the clinician involved. Such measures need to be standardised such that the determinants and measurement of quality of life can be assessed and made based on sound empirical research evidence.

3. 2 Social Functioning and Occupational Status

An improvement in a patient’s quality of life is inevitably going to be linked with their social functioning and their ability to find employment. A study which focused on social functioning was conducted by Wiersma et al (2001). A sample of 40 patients received CBT and coping skills training over a period of 4 years. The therapy focussed upon addressing auditory hallucinations and on improving social functioning. The results found that there was a significant reduction in the frequency of hallucinations and their burden on the patient. It was also reported that 18% of the patients experienced a complete disappearance of their auditory hallucinations. Sixty per cent showed significant improvements in terms of anxiety, loss of control and disturbance of thought. Finally, 67% of those involved with the study showed significant improvements regarding social functioning. Having said this, there are a number of important limitations within the methodology used within this study which ensure that it is difficult to confidently accept any findings. No control condition was evident, the assessors were not independent and the baseline measures used were made retrospectively. Furthermore, it was also reported that booster sessions were required to strengthened the skills and to enhance them in specific social situations. These limitations ensure that one needs to consider other research in this area in order to accurately assess the efficacy and effectiveness of using CBT for the treatment of psychosis.

Barrowclough et al (2001) conducted a study which involved integrating the use of routine care with motivational interviewing, CBT and Family Therapy. Subsequent analysis revealed that this approach had facilitated significant improvements in the patients’ general functioning and abstinence from alcohol and/or substance abuse. Barrowclough et al (2001) suggest that the co-morbidity of symptoms alongside those involved with Schizophrenia can ensure that the patient finds it very difficult to find appropriate work. Thus this integrated treatment approach has been shown to increase social functioning and this could be theorised to then improve the patients’ chances of enhancing their occupational status. Such an assertion requires further empirical investigations such that the strength of this association can be determined.

3. 3 Hospital Readmission and Relapse

Research has been conducted which has assessed the effectiveness of using CBT for treating people who had been experiencing persistent psychotic symptoms for at least six months (Tarrier et al 1998). Participants either received CBT or supportive counselling for 20 hours over a 10 week period. The supportive counselling focussed on unconditional positive regard and developing rapport. One benefit of this research was that the assessors were both blind and independent. Those within the CBT group were found to be more likely to experience a 50% reduction in symptomotology and to spend fewer days in hospital. This study was subsequently criticised as significant differences were not found between the outcomes of those within the CBT and supportive counselling groups. However, it does provide some evidence that CBT can reduce the number of days that a Schizophrenic patient spends in hospital. This finding was supported by the results of the Bechdolf et al (2001) study which compared the benefits of CBT and Psycho-Education in the treatment of Schizophrenia. The results from the 88 participants found that those within the CBT group were significantly less likely to be re-hospitalised.

In terms of relapse rates, an important study was reported by Gumley (2003). A group was identified as being at high risk from relapse. They were targeted such that their fear of relapse could be reduced, their management of the risk of relapse could be educated regarding the key warning signs and provided with booster sessions to further help prevent relapse. The targeting took place at the initial stage of the recovery process. At the 12 month follow up period, 15. 3% of those within the experimental group were found to have relapsed compared to 26. 4% of those who were ‘ treated as usual’ Thus it was possible to significantly reduce the relapse rates of the Schizophrenic patients. Again this result was supported by the Bechdolf et al () study which reported lower relapse rates for patients given CBT relative to those who were treated as usual. In contrast, Tarrier et al (2004) found that there were no significant benefits in terms of relapse rates when CBT was given to people after their first psychotic episode compared to those being treated as usual. Therefore CBT does appear to help to reduce the relapse rates of those suffering with Schizophrenia but such benefits may not be significant for all forms of the illness.

3. 4 Compliance With Pharmacological and Non-Pharmacological Treatments

A key element of most medical treatments is that the patient is compliant where necessary. Clearly if they are not compliant then this has the potential to reduce the effects of the treatment. The problem of non-compliance in the treatment of psychotic symptoms has been identified within previous research. For example, Perkins and Repper (1999) suggested that non-compliance is an issue with approximately 43% of admissions to psychiatric units. One study which has investigated Schizophrenic patients and their compliance with CBT was reported by Bechdolf et al (). They compared CBT with the use of Psycho-education and found that the compliance levels were significantly higher for the CBT group. This is an encouraging finding in the light of the importance which can be placed on the patient’s compliance with treatment in terms of its effect on the overall success of CBT as a treatment option.

3. 5 Dropping Out and Compliance to CBT

The issue of compliance and the possibility of patients dropping out of treatment is a significant one. This is particularly the case with CBT is it relies upon a trusting relationship being formed between the therapist and the patient (Beck 1995). If the patient is not willing to be part of such a relationship then this will likely result in CBT being a less effective option than it otherwise could be. The study conducted by Jenner et al (1998) investigated this and found that 9% of their participants dropped out of the treatment programme. Although this is a relatively small number, it still represents a significant issue and one which merits consideration by both researchers and mental health professionals.

3. 6 General Impression of Clinical/Professionals and Others

It is important that a 360 degree perspective of the use of CBT for the treatment of Schizophrenia is gained so that a comprehensive picture of how its use is perceived can be obtained. This approach will need to take account of the views of the mental health professionals involved, the family of the patient and the patient themselves. With regards to the clinicians, the significant research findings have led many to advocate the use of CBT for the treatment of Schizophrenia (Thornicroft and Susser 2001). Therefore it would appear that it is an approach which is supported by the clinicians and professionals involved. Other quantitative research conducted by Jenner et al (1998) has found that 78% of the family of patients and the patients themselves were satisfied with their experience of CBT for treating Schizophrenia. Further research has focused on the patient in particular. For example, Messari and Hallam (2003) conducted in-depth qualitative interviews with four in-patients and one out-patient, all of which were suffering with Schizophrenia. The patients reported that they were in favour of the educational aspect of the CBT approach. They also noted that although the therapist was trying to change their beliefs, this was because the beliefs were false and not because it was a form of coercion One participant was against the use of CBT treatment. They indicated that it was unhelpful and that they were merely passively complying to the treatment as part of the powerful medical profession. Therefore, CBT appears to be a popular treatment for Schizophrenia amongst clinicians/professionals, the families of patients and the patients themselves. However, question marks do remain over patient opinions as not all of those involved in the Messari and Hallam research reported positive opinions. Further investigations of patient views need to be conducted with larger samples in order that a more confident conclusion can be drawn regarding patient views of the use of CBT for Schizophrenia.

3. 7 Unexpected or Unwanted Effects

As within the evaluation of any treatment programme, one must consider the negative as well as the positive aspects and effects. Some studies within this field have demonstrated that there is no significant benefit of using CBT compared to when the patients are treated as usual. This was the case with the research reported by Haddock et al (1999). Although this was a project which used a relatively small sample, it does indicate that CBT may not be appropriate in all circumstances in the treatment of Schizophrenia. Further investigations are required in order that the most appropriate application of CBT in this field can be determined. Rather than showing negative effects, other research has served to demonstrate that CBT did not have the positive effects which were expected. For example, Lewis et al (2002) found that CBT did not lead to the expected improvement in delusions, positive symptoms or Total Symptom Scores. Such drawbacks are highlighted by Turkington and McKenna (2003) who argue that inappropriate conclusions have been drawn based on the research evidence in this field. The results of some of the more prominent studies in this research field are summarised in Table 1 overleaf.

Table 1Effect sizes for improvement with cognitive–behavioural therapy (CBT) in studies using blind evaluation and a control intervention

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Study | Sample size | Finding | Effect size 1 | 95% Cl | | Tarrier et al (1999) Positive symptoms | 23 CBT, 21 SC | NS | -0. 47 | -1. 07 to 0. 13 | | Tarrier et al (1999) Negative symptoms | 23 CBT, 21 SC | NS | -0. 07 | -0. 66 to 0. 52 | | Haddock et al (1999) | 8 CBT, 10 SC | NS | +0. 57 | -0. 38 to 1. 52 | | Sensky et al (2000) | 46 CBT, 44 befriending | NS | -0. 08 | -0. 50 to 0. 33 | | Lewis et al (2002) | 78 CBT, 71 SC | NS | +0. 10 | -0. 22 to 0. 42 | | SC, supportive counselling; NS, no significant difference. |  | | | | | 1. Negative value favours CBT. |  | | | | | 2. Effect size calculation based on standard deviations in Cormac. |  | | | | | 3. For this calculation the average of the two effect sizes in Tarrier et al (1999) was used. |  | | | | |  |  |  |  |  | |

Turkington and McKenna (2004) suggest that if a drug had been tested and found to have the results displayed in Table 1 then it would have been consigned to history. As the clear benefits of CBT for the treatment of Schizophrenic patients are not yet fully understood, unexpected research findings will continue to be reported. Thus, research in this field has not always revealed the findings which were anticipated by the researchers.

3. 8 Economic Outcome

When one is evaluating any treatment, the economics of its application must be taken into consideration. Even if a treatment is shown to be very effective, its use may not prove to be economically viable. With health care units working within strict budgets, any proposed treatments need to fit within the economic constraints which are placed upon those selecting the treatments to be used. CBT can be a costly approach. Within the Drury et al (2000) study patients were given eight sessions of CBT a week over a six month period. Although this was possible within the experimental setting, the extent to which such an intense treatment programme would be economically viable within clinical environments would be questionable. However, Bechdolf et al () does argue that the use of CBT can lead to cost savings through a reduction in the number of hospital days which are required and the probability that a patient will experience a relapse. It is unclear whether or not such cost savings exceed those involved in the cost of implementing CBT as a treatment option.

3. 9 Management of Change

A significant amount of research has been conducted regarding the management of the change of Schizophrenic symptoms via the use of CBT. A number of benefits have been highlighted by this research (Turkington and Kingdon 2000, Rector et al 2003). Recent research has indicated that different forms of CBT can be effective such as individual and group CBT (Warman 2005) and Functional CBT (Cater 2005). These benefits have been demonstrated with regards to acute, chronic and more specific psychotic symptoms. The management of each of these three areas will now be briefly considered.

The management of acute psychotic symptoms has been achieved with CBT within research. Tarrier et al (2004) found that CBT speeded up the recovery of those who had experienced their first psychotic episode. Furthermore, Startup et al (2004) found that CBT could be used to manage Acute Schizophrenia Spectrum Disorder. The management of these acute and initial psychotic episodes has been highlighted as very important in determining the long term course of the patient’s recovery (Birchwood and Tarrier 1992).

CBT has also been used in the management of more persistent psychotic symptoms (Temple and Ho 2005). Kuipers et al (1998) found that CBT could be used to significantly reduced the frequency of more persistent symptoms and delusional distress. These benefits were still found to be significant at the nine month follow-up stage. A major study in this area was conducted by Sensky et al (2000) involving participants in the post-acute stage of psychosis. Improvements were found in both negative and positive symptoms and these improvements remained at the 18 month follow-up period. This study used a relatively robust methodology which overcame many of the limitations associated with previous research. The use of blind assessors and a low intensity of treatments means that the data is more likely to be reliable and that it is likely that the findings would generalise to a clinical setting.

Some research has been conducted to assess the use of CBT in the management of psychotic symptoms within a clinical setting. The Tayside-Fife clinical trial found that CBT was related to significantly more clinical improvement relative to participants who had been given supportive counselling or who had been treated as usual. Furthermore, patients given CBT were found to be more satisfied with their treatment compared to those in the other groups. Morrison (2002) also provided evidence to suggest that the benefits of CBT can be translated to a community setting. This effect was found to still be significant at a 12 month follow-up.

Finally, research has also shown that CBT can be used to target specific symptoms which are associated with Schizophrenia. For example, Trower et al (2004) found that CBT can help manage ‘ commanding’ hallucinations in which the patient is being instructed to perform certain behaviours by voices in their head. Halperin et al (2000) also provided evidence which suggested that CBT can be used to treat the social anxiety which can be associated with Schizophrenia.

4. 0 CONCLUSIONS

Throughout history a wide range of different approaches have been taken to the treatment of Schizophrenia. Medication, Electro-Convulsive Therapy and Family-Focused Therapy have all been applied to the treatment of Schizophrenia. In more recent times, researchers and therapists have been seen to advocate the use of Cognitive Behavioural Therapy as a feasible and effective treatment method. This discussion has considered the CBT approach and the theoretical model which underpins it. The development of CBT has been addressed and the research evidence which has been provided to evaluate the use of CBT in the treatment of Schizophrenia has been critically analysed. This analysis particularly focused on a set of 25 research studies and was conducted with reference to the following nine key areas: Determinants and measurement of quality of life, social functioning and occupational status, hospitalisation and relapse, compliance with pharmacological and non-pharmacological treatments, drop out and compliance with CBT, general impressions of CBT, unexpected and unwanted effects, the economic outcomes of CBT and its use in the management of change.

Discussions within each of these areas has demonstrated that CBT appears to have the potential to be an effective and feasible approach for the treatment of Schizophrenia. However, further research is required to help clarify the benefits of CBT and to identify the circumstances in which it is most effective and the factors which have a significant impact on this effectiveness. CBT could be used throughout the treatment programme from those who are at high risk of experiencing psychotic episodes (Morrison et al 2004) through to the treatment of Schizophrenia patients and then to help minimise the probability that they will relapse and require further time in hospital. The research evidence suggests that CBT can be effective for acute and chronic psychotic symptoms. There is also some research evidence that these benefits can be successfully transferred to clinical and community settings.

CBT certainly has a role to play within the multi-disciplinary approach which is now taken to the treatment of mental illness. As part of this comprehensive treatment package the potential benefits of CBT can be realised and steps can be taken to help prevent any possible drawbacks. This will help to ensure that a Schizophrenic patient will receive a feasible, comprehensive and effective treatment package which will effectively address all of their psychotic symptoms and ultimately facilitate an improvement in their mental health.

REFERENCES

Barrowclough,, C., Haddock, G., Tarrier, N., Lewis, S. W., Moring, J., Schofield, N. and McGoven, J. (2001). Randomized Control Trial of Motivational Interviewing, Cognitive Behaviour Therapy, and Family Intervention for Patients with Co morbid Schizophrenia and substance Use disorders. American Journal Psychiatry. 158, 1706-1713.

Bechdolf, A., Knost, B., Kuntermann, C., Schiller, S., Klosterkotter, J.(, Hambrecht, M. and Pukrop, R. 2004). A randomised comparison of group cognitive-behavioural therapy and group psycho education in patients with schizophrenia. Acta Psychiatric Scand. 110, 21-28.

Beck, J. S. (1995) Cognitive Therapy: Basics and Beyond . Guildford: New York University Press

Beck, A. T., & Rector, N. A. (2000) Cognitive therapy of schizophrenia. American Journal of Psychotherapy, 54(3): 291-300.

Birchwood, M & Tarrier, N (1992) Innovations in the Psychological Management of Schizophrenia , John Wiley & Sons Ltd, UK

Carpenter, W. T. (2001). Evidence based treatments for first-episode schizophrenia? American Journal of Psychiatry 158(11): 1771-1773.

Cater, D. (2005). A pilot study of functional Cognitive Behavioural Therapy (fCBT) for schizophrenia. Schizophrenia Research. 74, 201-209.

Drury, V., Birchwood, M. and Cochrane, R. (2000). Cognitive therapy and recovery from acute psychosis: a controlled trial. 3. Five-year follow-up. British journal of psychiatry. 177, 8-14.

Gumley, M. (2003). Early intervention for relapse in schizophrenia: results of a12-month randomised controlled trial of cognitive behavioural therapy. Psychological Medicine. 33, 419-431.

Haddock, G., Tarrier, N., Spaulding, W., Yusupoff, L., Kinney, C. & McCarthy, E. (1998) Individual cognitive-behaviour therapy in the treatment of hallucinations and delusions: A review. Clinical Psychology Review, 18(7): 821-838.

Haddock, G., Tarrier, N., Morrison, A. P., Hopkins, R., Drake, R. & Lewis, S. (1999). A pilot study evaluating the effectiveness of individual inpatient cognitive-behavioural therapy in early psychosis. Society for Psychiatric Epidemiology. 34, 254-258.

Halperin, S., Nathan, P., Drummond, P. & Castle, D. (2000). A cognitive –behavioural, group-based intervention for social anxiety in schizophrenia. Australia and New Zealand Journal of Psychiatry. 34, 809-813.

Jenner, G., Willige, Van de. & Wiersma, D. (1998). Effectiveness of cognitive therapy with coping training for persistent auditory hallucinations: a retrospective study of attenders of a psychiatric out-patient department. Acta Psychiatry Scand 98, 384-389.

Kinderman, P & Cooke, A (2000) Understanding Mental illness, Recent advances in understanding mental illness and psychotic experiences , The British Psychological Society, UK

Kuipers, E. (1998). London-East Anglia randomised controlled trial of cognitive-behaviour therapy for psychosis. II: Follow-up and economic evaluation at 18 months. British journal of psychiatry. 173, 61-68

Lewis, S., Tarrier, N. and Haddock, G. (2002). Randomised controlled trial cognitive-behavioural therapy in early schizophrenia: acute-phase outcomes. British Journal of Psychiatry. 181 (suppl, 43), s91-s97.

Messari, S & Hallam, R. (2003). CBT for psychosis: A qualitative analysis of clients’ experiences. British Journal of Clinical Psychology. 42, 171-188.

Morrison, A. P., Renton, J. C., Williams, S., Dunn, H., Knight, A., Krentz, M., Nothard, S., Patel, D. and Dunn, G. (2004). Delivering cognitive therapy to people with psychosis in a community mental health setting: an effectiveness study. Acta Psychiatric Scand. 110, 36-44.

Morrison, A. P., Bentall, R. P., French, P. and Lewis, S. W. (2002). Randomised control trial of early detection and cognitive therapy for preventing transition to psychosis in high-risk individuals. British journal of psychiatry. 181, s78-s84.

Morrison, A. P. (2002) A Casebook of Cognitive Therapy for Psychosis . Hove: Brunner Routledge

Nelson H (1997) Cognitive Behavioural Therapy with Schizophrenia , Stanely Thornes, UK

Perkins, R. E. & Repper, J. M. (1999) Compliance or informed choice. Journal of Mental Health, 8(2): 117-129.

Rector, N. A., Seeman, M. V. & Segal Z. V. (2003). Cognitive therapy for schizophrenia: a preliminary randomised controlled trial. Schizophrenia Research. 63, 1-11.

Robert, R., Durham, R. C., Guthrie, M., Morton, V., Reid, D. A. and Treliving, L. R. (2002). Tayside-Fife clinical trial of cognitive-behavioural therapy for medication-resistant psychotic symptoms. British journal of psychiatry. 182, 303-311.

Sensky, T., Turkington, D., Kingdon, D., Scott, J. L., Scott, J., Siddle, R., O’Carroll, M. & Barnes, T. (2000) A randomised controlled trial of cognitive-behavioural therapy for persistent symptoms in schizophrenia resistant to medication. Archives of General Psychiatry , 57: 165-172.

Startup M., Jackson M. C.& Bendix S. (2004). North Wales randomised controlled trial of cognitive behaviour therapy for acute schizophrenia spectrum disorders: outcome at 6 and 12 months. Psychological Medicine. 34, 413-422.

Tarrier, N. Bentall, R., Drake, R. Kindermann,